

ABSTRACT OF THE DISCLOSURE

Real time determination of the presence of emulsion in a formation fluid is accomplished using an optical probe, preferably an attenuated total reflectance probe.

- 5 The determination can then be used to appropriately increase, decrease or leave unchanged the use of demulsification additives or other means to control emulsion formation. The method is particularly useful for free water knock-out separations, where a plurality of probes can be used to distinguish the location and/or volume of emulsion, or "rag", layer and thereby to facilitate decantation of relatively pure oil and water
- 10 fractions. It can also be effectively used in pipelines, and can optionally determine the degree of emulsification and trends toward emulsification or demulsification.